TAOGLAS®



Datasheet

Part No:
GW.39.A153

Description

ISM/BT/Wi-Fi 2.4GHz IP67 Terminal Mount Antenna with Hinged RP-SMA Plug

Features:

ISM/Bluetooth/Wi-Fi Terminal Mount Antenna
Covering: 2400-2500MHz
IP67 Waterproof Enclosure
Dims: Ø12.9 x 123
Connector: RP-SMA(M)
RoHS & Reach Compliant

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1. Introduction



The Taoglas The **GW.39.A153** is a compact, high-performance 2.4 GHz terminal mount antenna designed to provide reliable wireless connectivity for **Wi-Fi, Bluetooth®, Zigbee®, Thread and ISM applications**. Its versatile 2.4 GHz operation makes it an ideal antenna solution for IoT gateways, smart building systems, industrial equipment and connected devices.

A key feature of the GW.39 is its **IP67-rated hinged construction**, combining flexible antenna positioning with protection against dust and water ingress. The rugged enclosure makes the antenna well suited to both indoor and outdoor applications where environmental protection and reliable wireless performance are required. Similar Taoglas GW terminal antennas use an IP67 enclosure and hinged RP-SMA (M) connector specifically to support indoor and outdoor installations. The hinged **RP-SMA (M) connector** allows the antenna to be positioned to suit different device orientations and space-constrained installations, providing greater flexibility when integrating the antenna onto gateways, enclosures and wireless equipment.

The GW.39 provides **omnidirectional coverage across the 2.4 GHz band**, supporting dependable wireless connections for fixed and mobile IoT applications. Omnidirectional performance is also a core characteristic of the existing Taoglas IP67 GW terminal antenna family.

Typical Applications:

- IoT Gateways & Edge Devices, Wi-Fi Access Points
- Bluetooth®, BLE, Zigbee® & Thread Devices
- Smart Home & Building Automation
- Industrial IoT & Remote Monitoring
- Wireless Sensors & Control Systems
- Connected Agriculture and Smart City Infrastructure

For integration support, testing services or additional technical assistance, please contact your regional Taoglas customer support team.

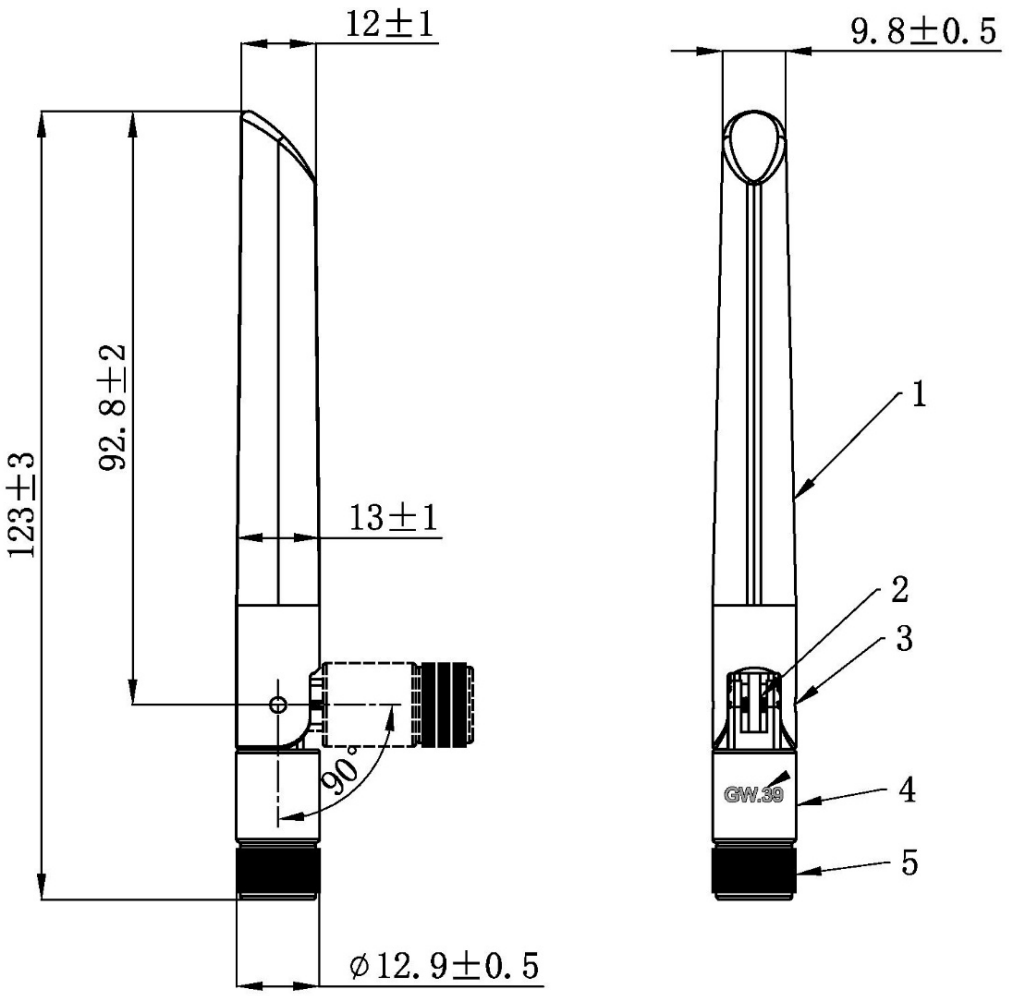
2. Specification

Electrical									
Band	Frequency (MHz)	Measurement	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi 2.4GHz	2400-2500	15x9cm - Bent	75.3	-1.23	3.75	50 Ω	Linear	Omni directional	10W
		15x9cm - Straight	76.6	-1.16	2.00				
		9x15cm - Bent	79.0	-1.03	4.02				
		9x15cm - Straight	88.2	-0.55	2.28				
		Free Space - Bent	93.2	-0.30	3.94				
		Free Space - Straight	95.7	-0.19	2.63				

Mechanical	
Dimensions	Ø12.9mm x 123mm
Weight	16g / 0.56 oz
Material	ASA
Connector	RP-SMA(M)

Environmental	
Waterproof Rating	IP 67 Enclosure
Operation Temperature	-40°C - +85°C
Storage Temperature	-40°C - +85°C
Relative Humidity	Non-condensing 65°C 95% RH

3. Mechanical Drawing



	Name	Material	Number	Finish
5	RP-SMA(M)	Brass	1	Black
4	SMA holder	PC+PBT	1	Black
3	Pin	POM	2	Black
2	Rg178 Cable	FEP	1	Brown
1	Antenna Enclosure	ASA	1	Black

4. Packaging



☑ 10 PCS / Ten-pack bag

☑ Ten-pack Bag (mm): 400x150

☑ Weight (g): 172 ±3%



☑ 50 PCS /PE Bag

☑ PE Bag(mm): 230x330

☑ Weight (Kg): 0.86 ±3%

☑ SPQ Label



☑ 500 PCS / Carton

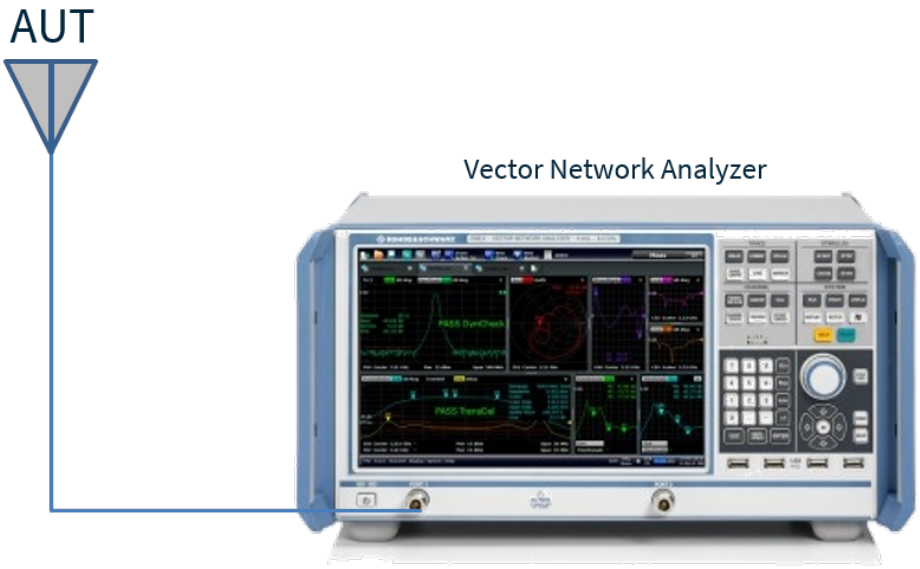
☑ Carton(mm): 320x250x290

☑ Weight (Kg): 9 ±3%

☑ Carton Label

5. Antenna Characteristics

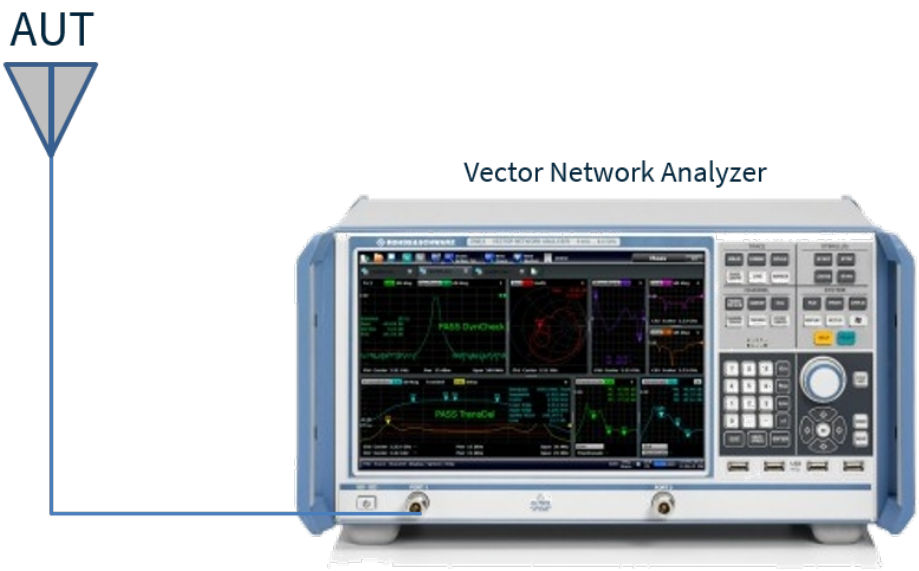
5.1 Test Setup - Straight

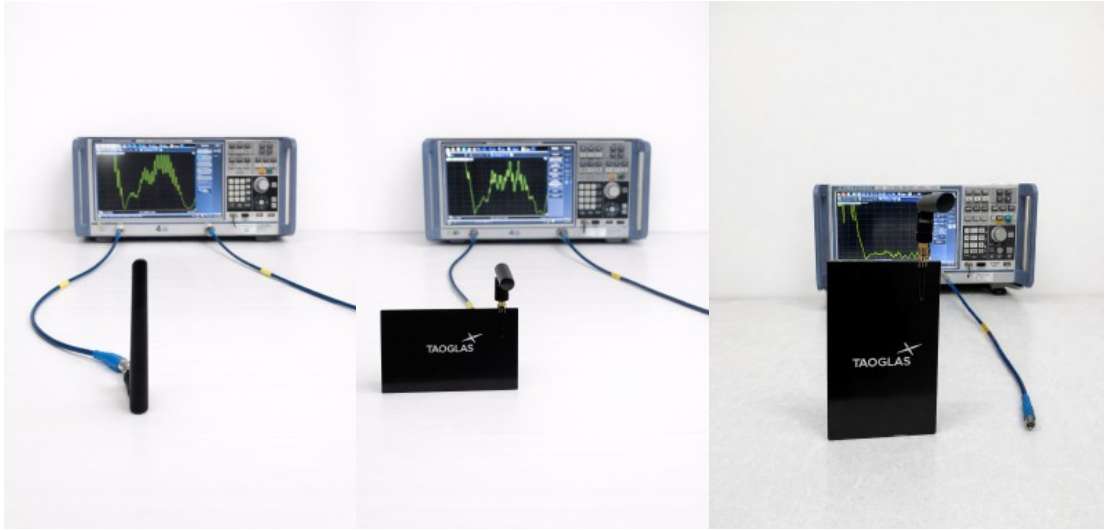




Free Space | 15x9cm Ground Plane | 9x15cm Ground Plane

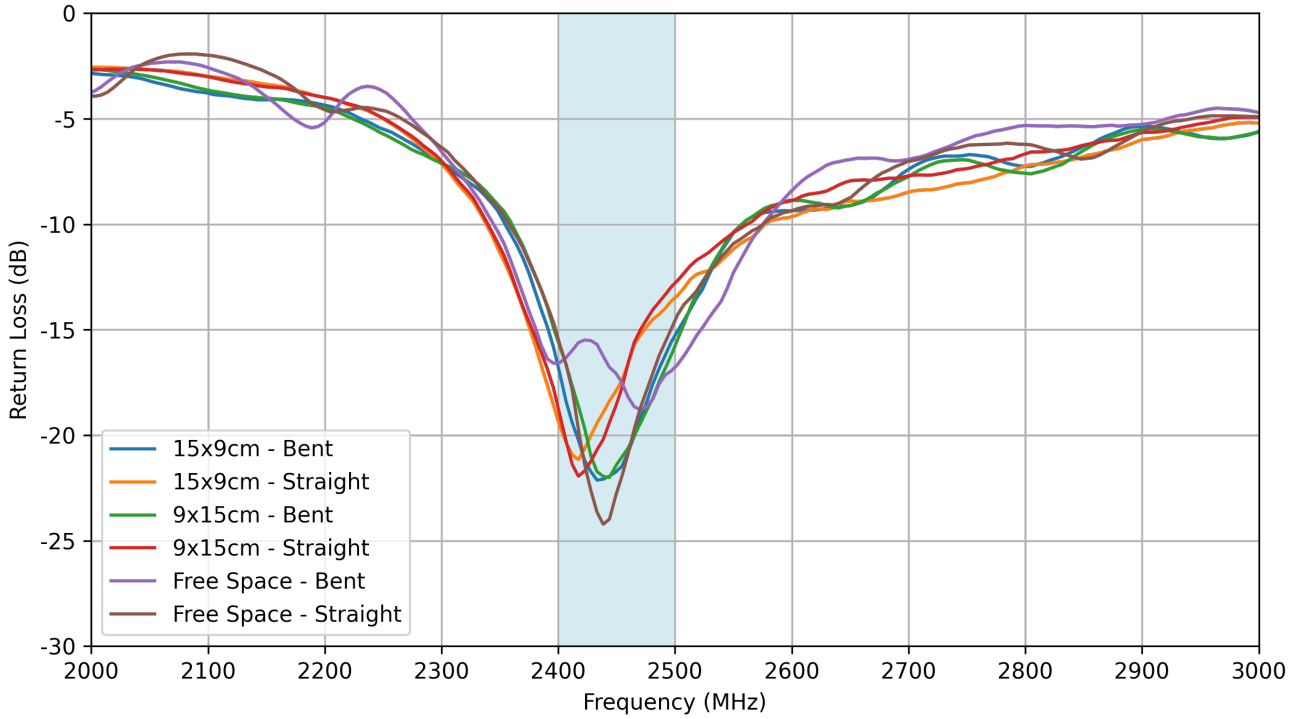
5.2 Test Setup - Bent



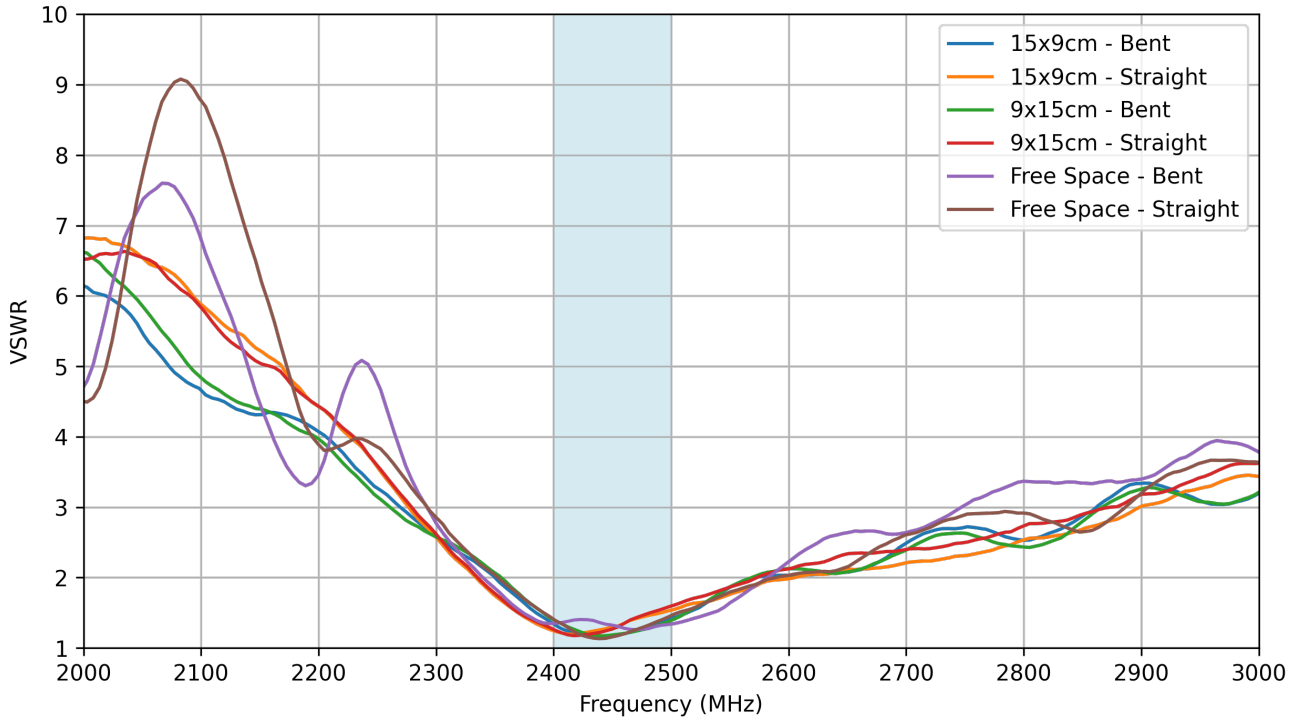


Free Space | 15x9cm Ground Plane | 9x15cm Ground Plane

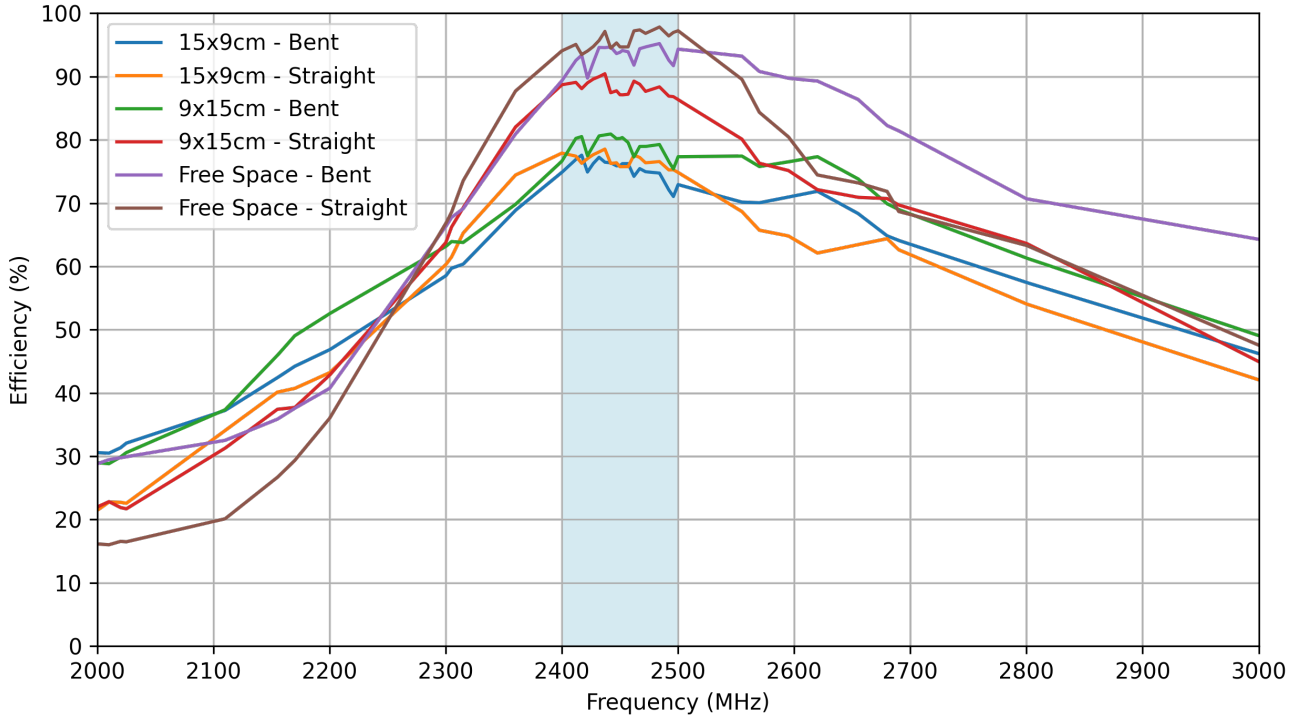
5.3 Return Loss



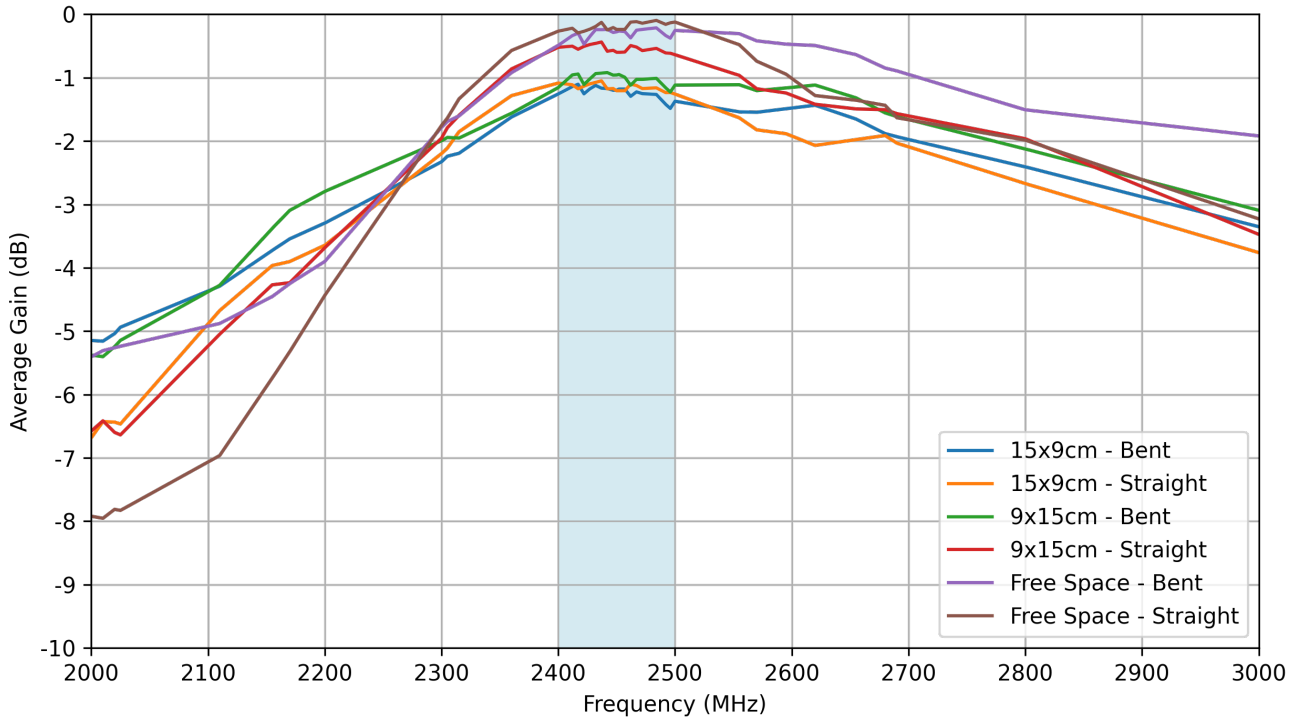
5.4 VSWR



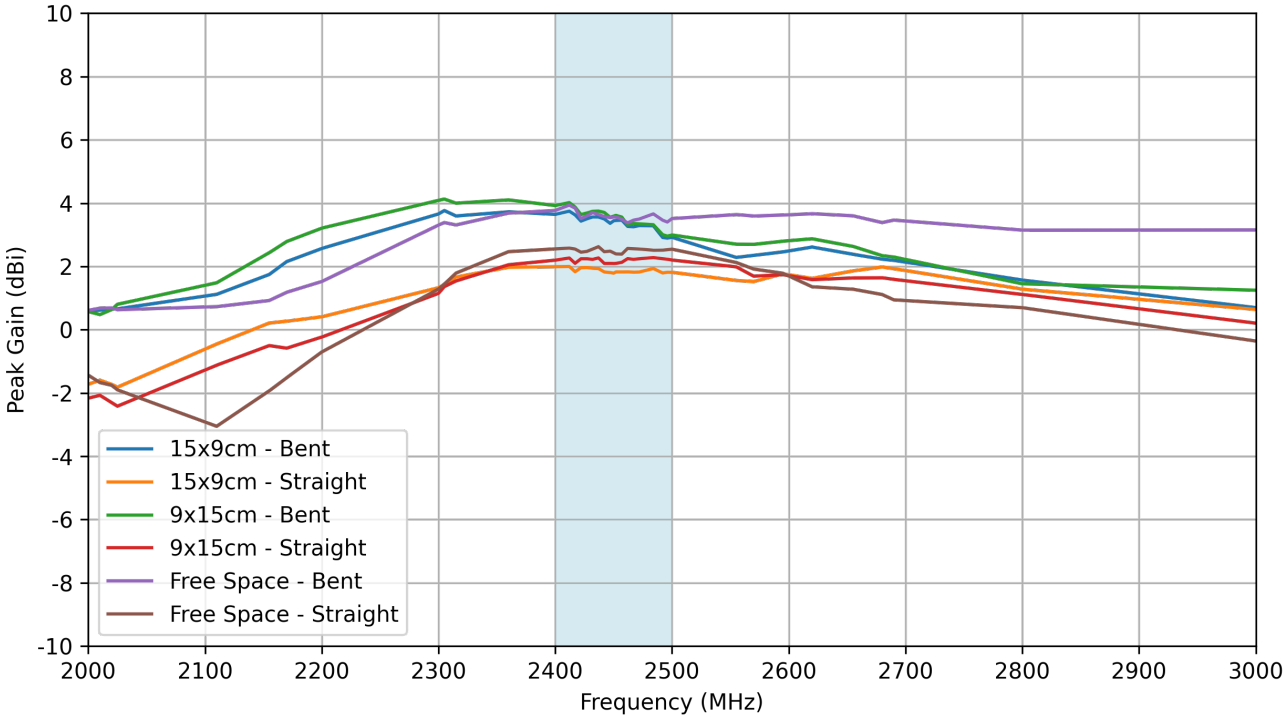
5.5 Efficiency



5.6 Average Gain

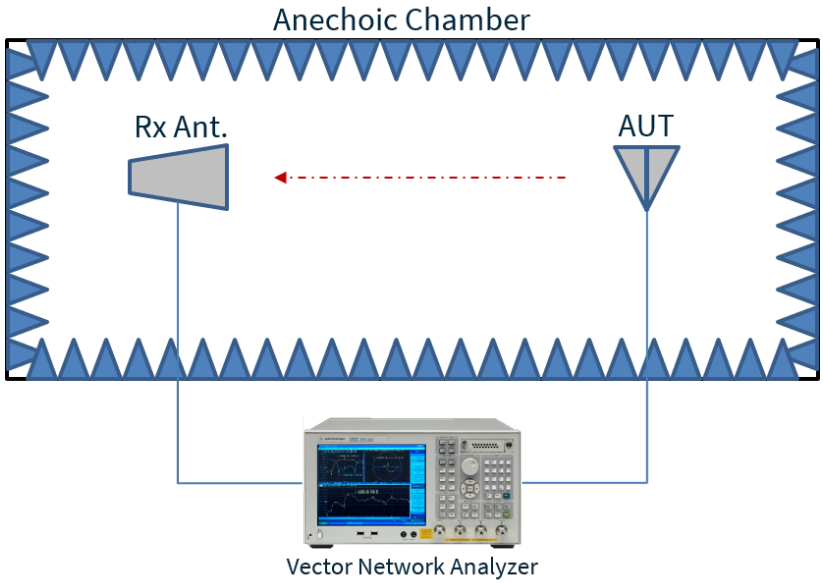


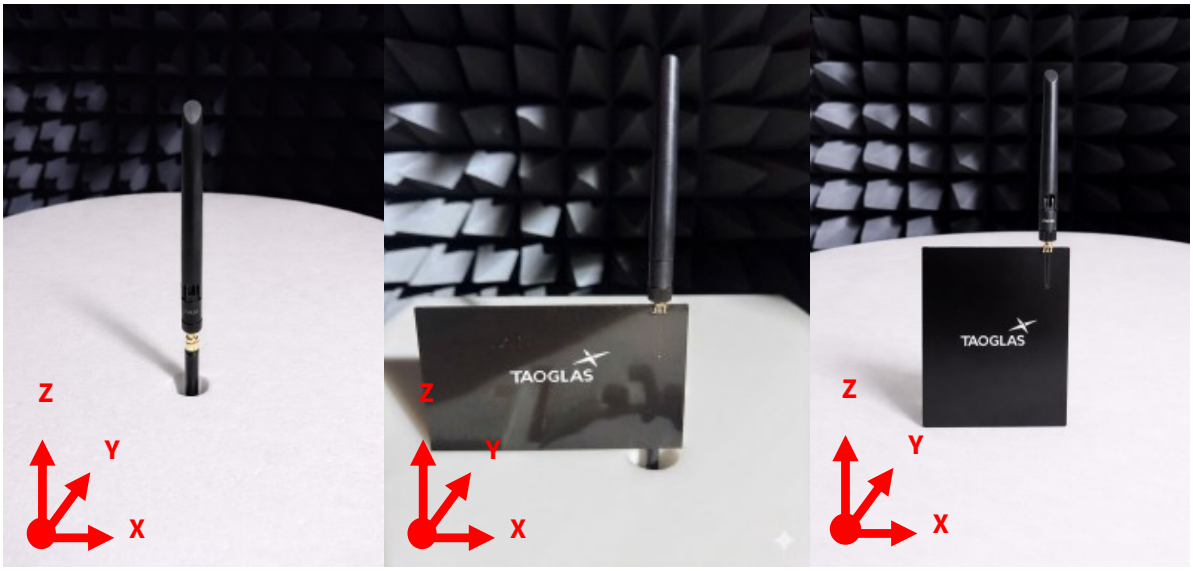
5.7 Peak Gain


Peak Gain (dBi)
Frequency (MHz)
15x9cm - Bent
15x9cm - Straight
9x15cm - Bent
9x15cm - Straight
Free Space - Bent
Free Space - Straight

6. Radiation Patterns

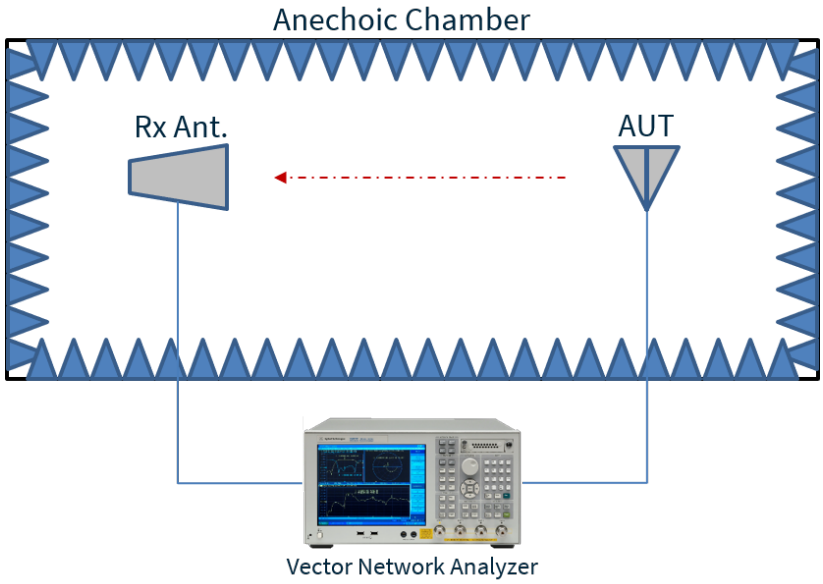
6.1 Test Setup - Straight

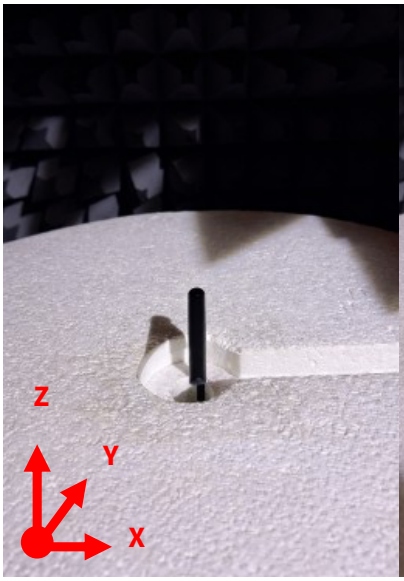




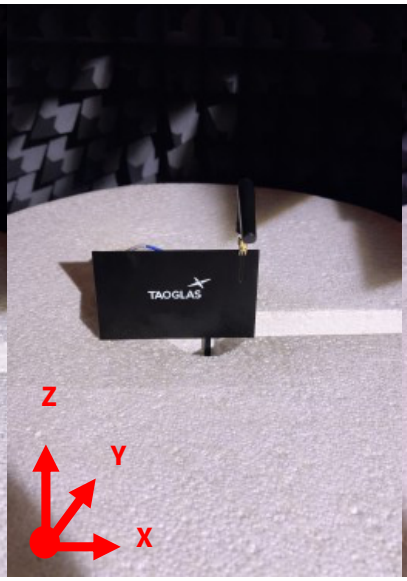
Free Space | 15x9cm Ground Plane | 9x15cm Ground Plane

6.2 Test Setup - Bent

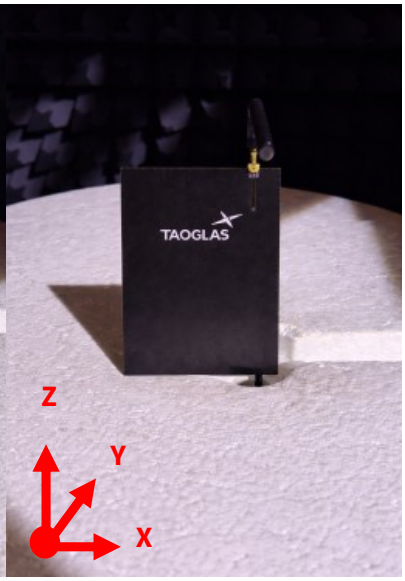




Free Space

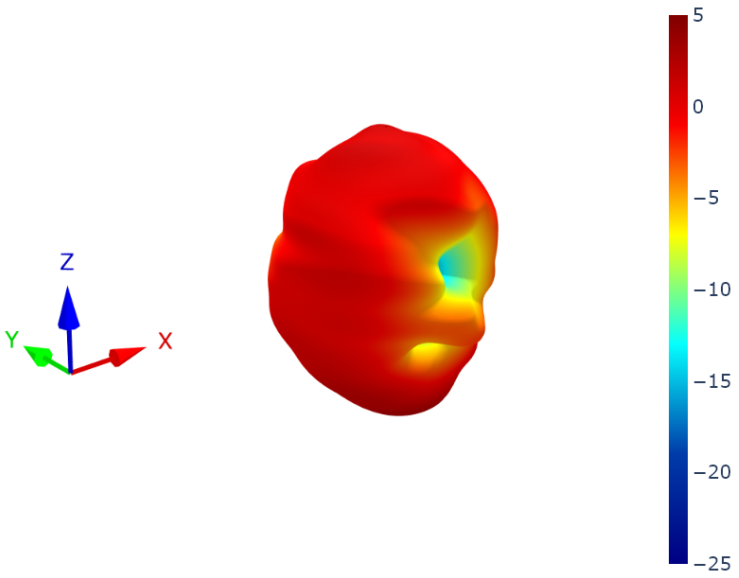


15x9cm Ground Plane

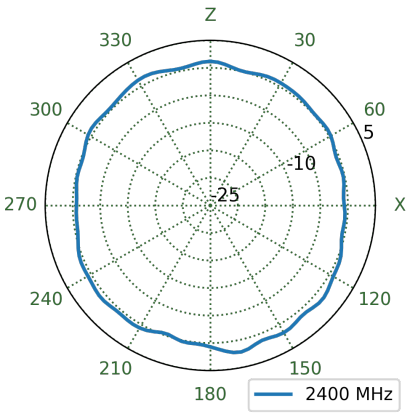


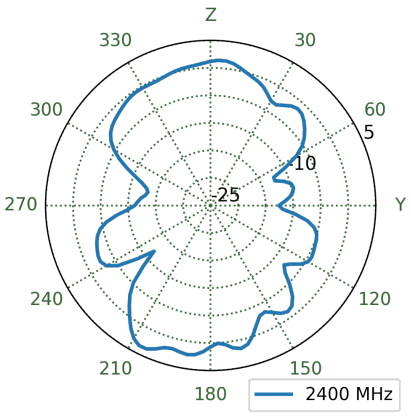
9x15cm Ground Plane

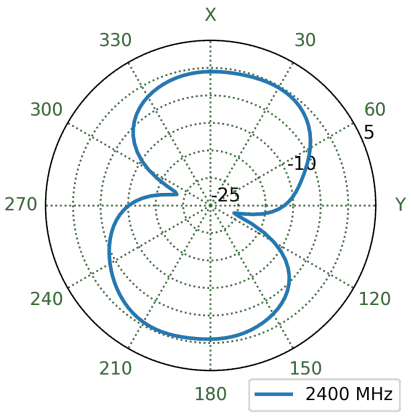
6.3 15x9cm - Bent Patterns at 2400 MHz



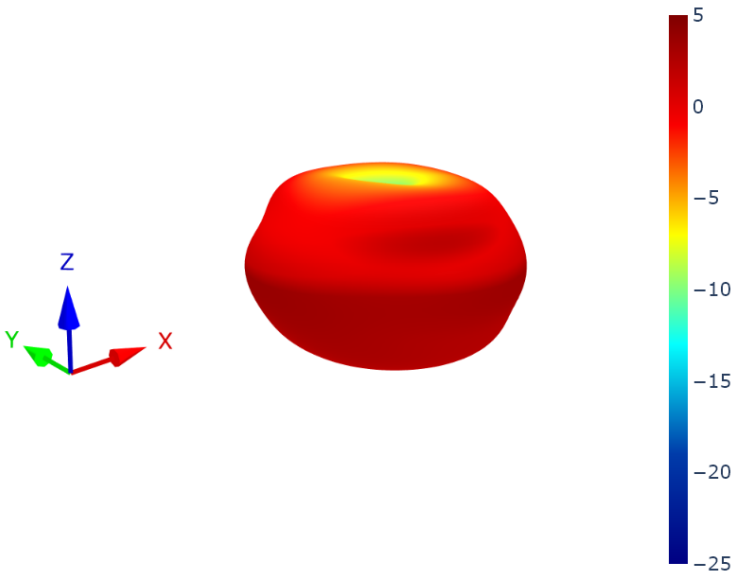
XZ Plane	YZ Plane	XY Plane



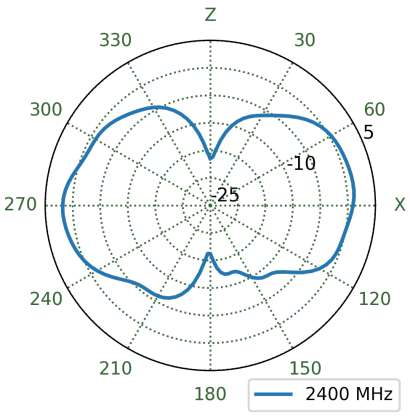


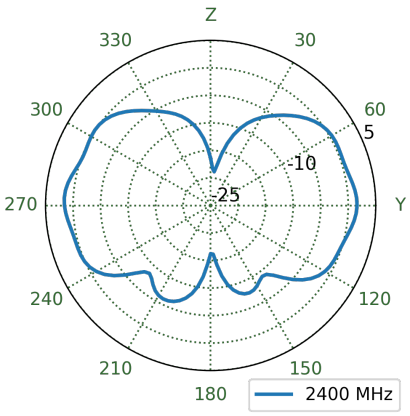


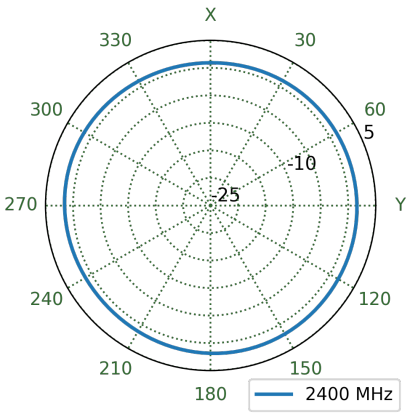
6.4 15x9cm - Straight Patterns at 2400 MHz



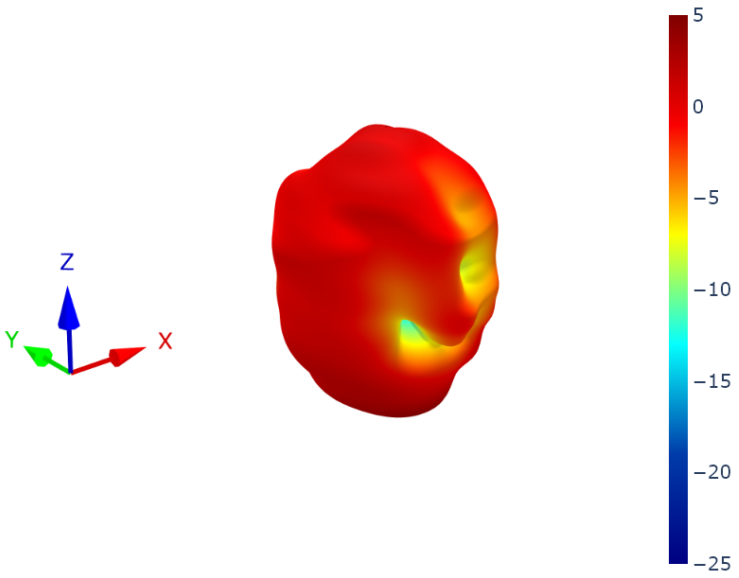
XZ Plane	YZ Plane	XY Plane



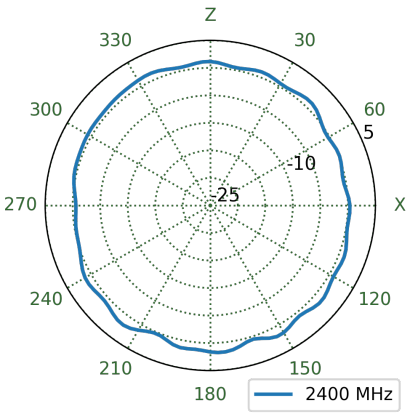


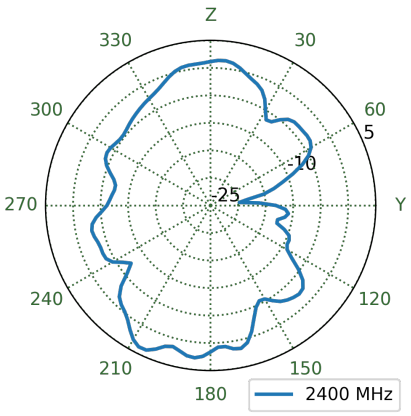


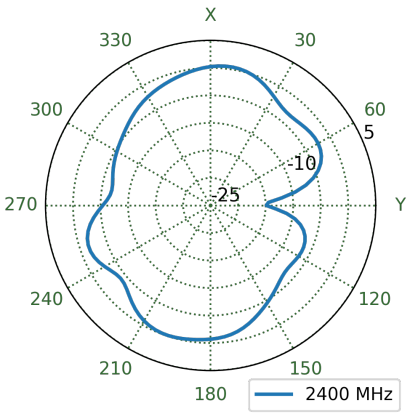
6.5 9x15cm - Bent Patterns at 2400 MHz



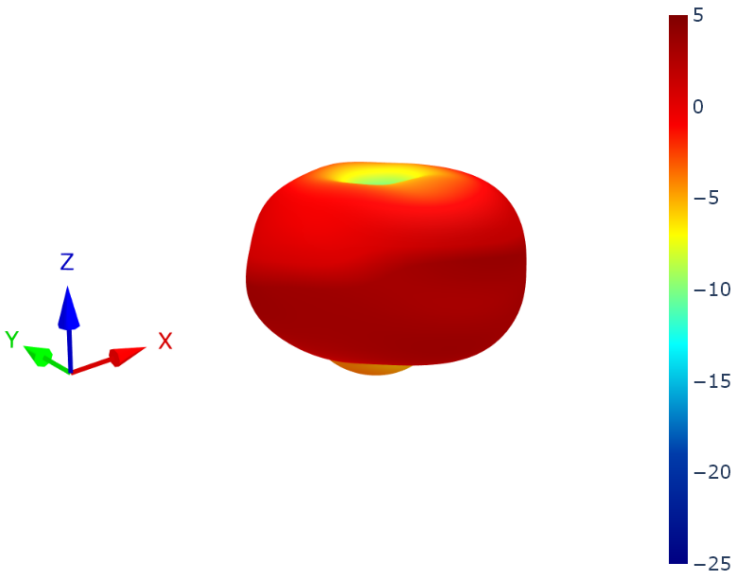
XZ Plane	YZ Plane	XY Plane



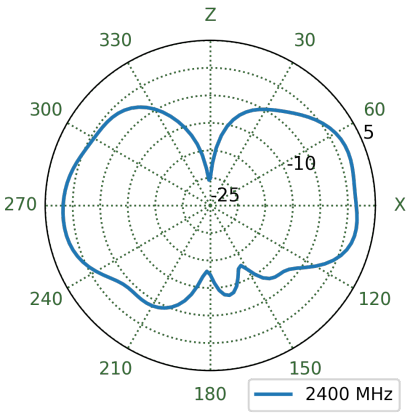


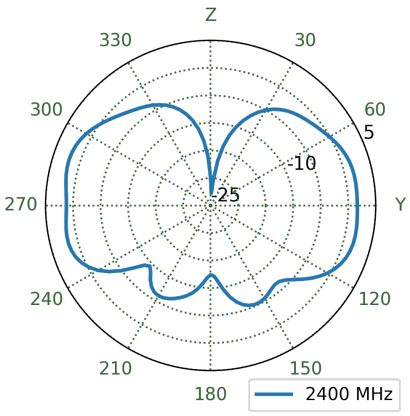


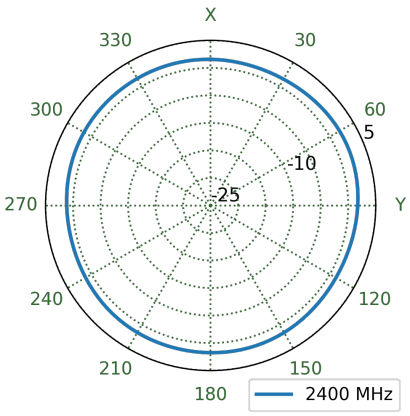
6.6 9x15cm - Straight Patterns at 2400 MHz



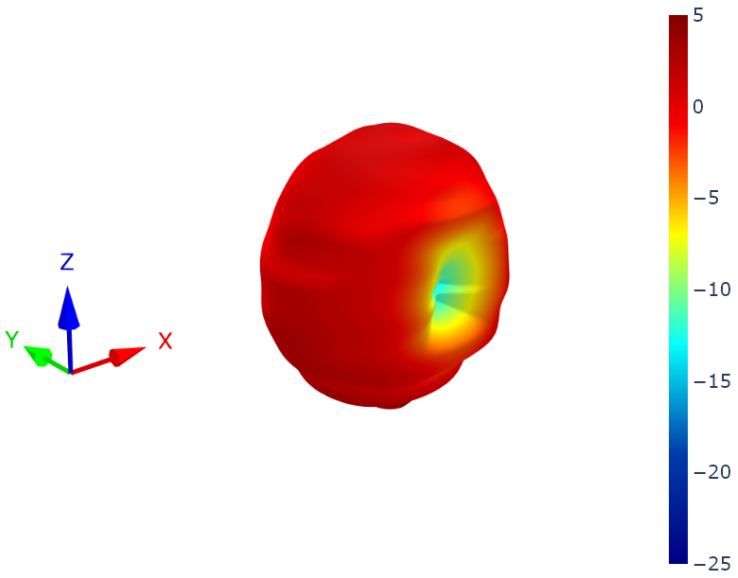
XZ Plane	YZ Plane	XY Plane



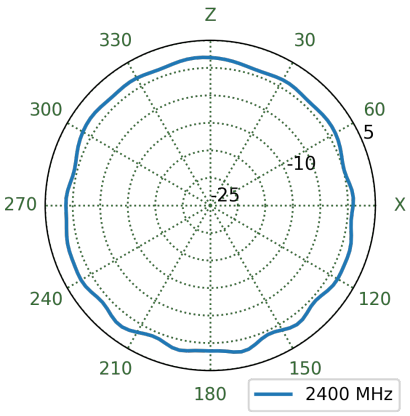


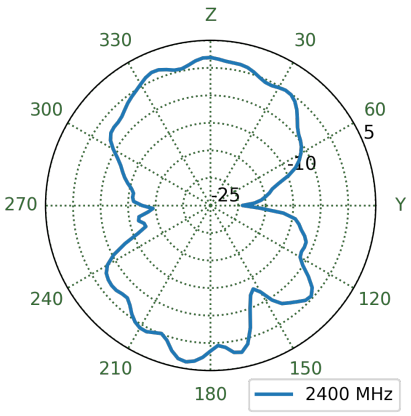


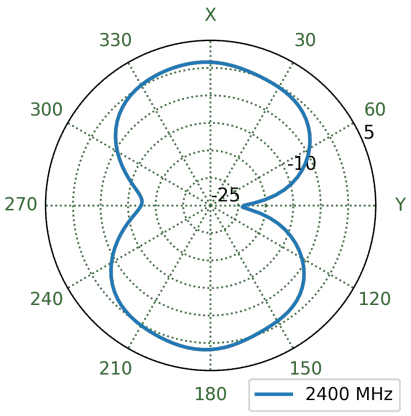
6.7 Free Space - Bent Patterns at 2400 MHz



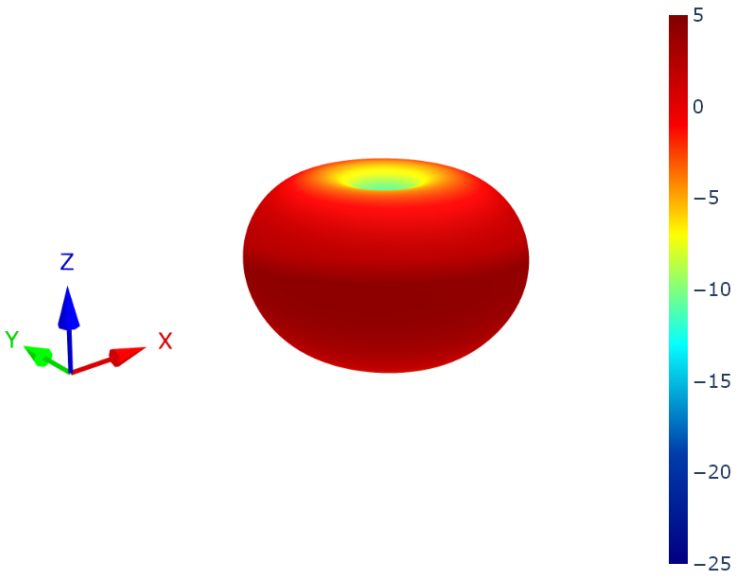
XZ Plane	YZ Plane	XY Plane



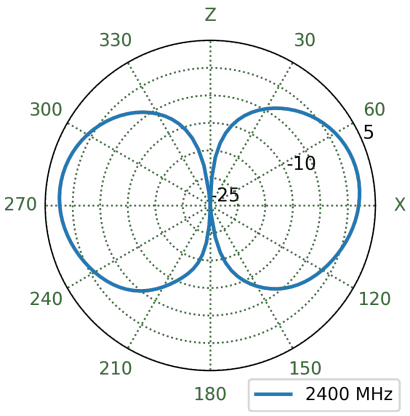


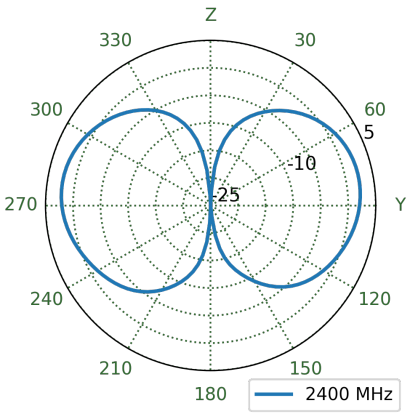


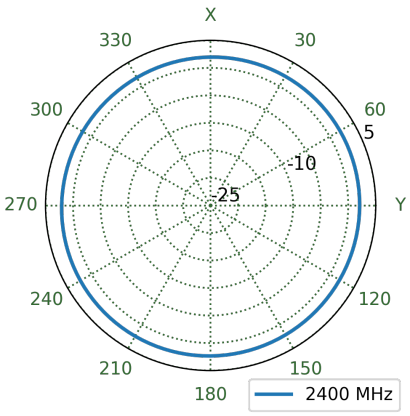
6.8 Free Space - Straight Patterns at 2400 MHz



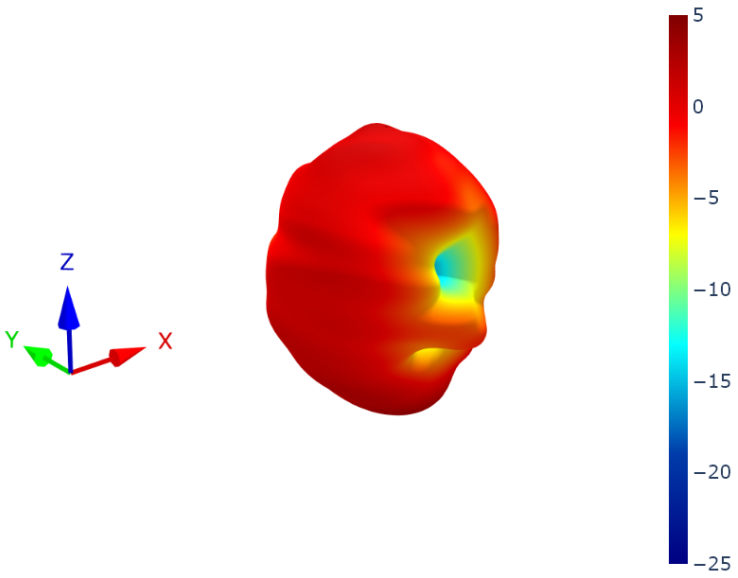
XZ Plane	YZ Plane	XY Plane



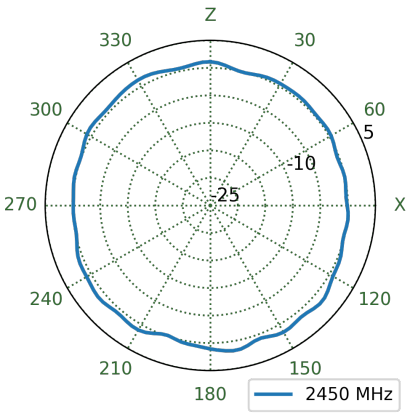


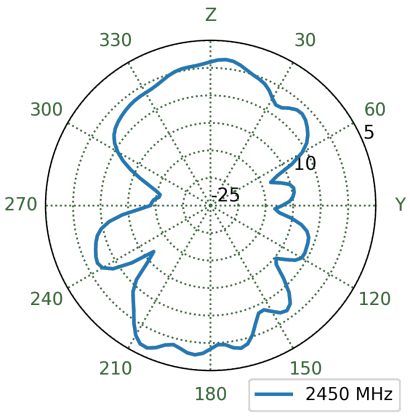


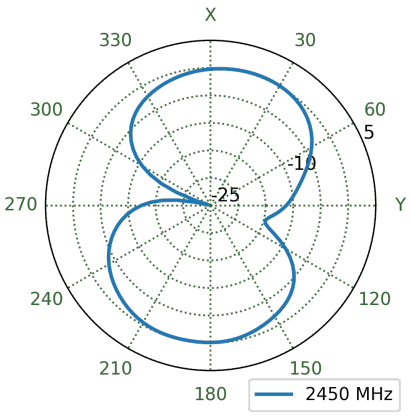
6.9 15x9cm - Bent Patterns at 2450 MHz



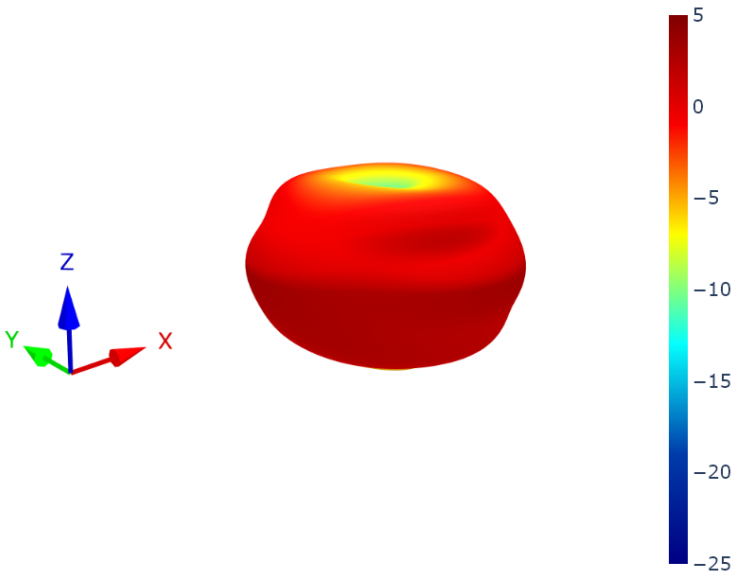
XZ Plane	YZ Plane	XY Plane



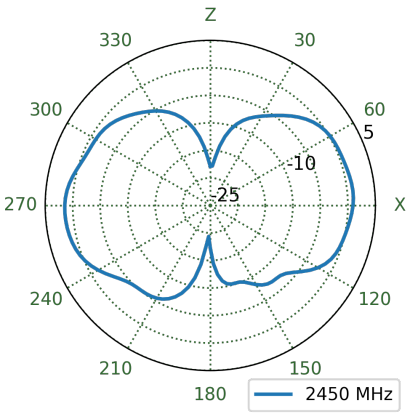


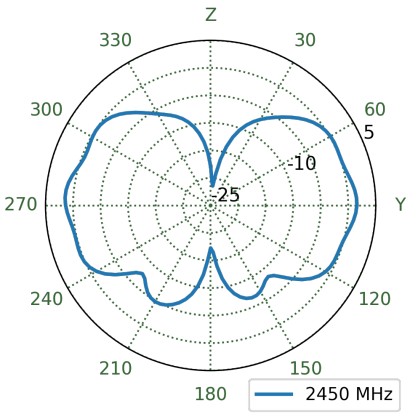


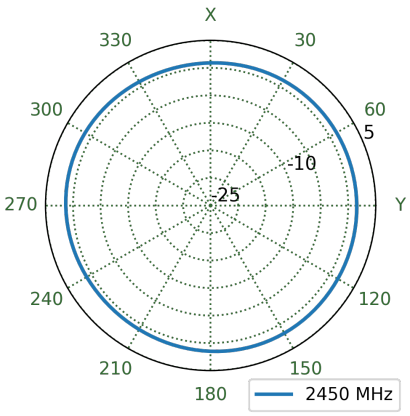
6.10 15x9cm - Straight Patterns at 2450 MHz



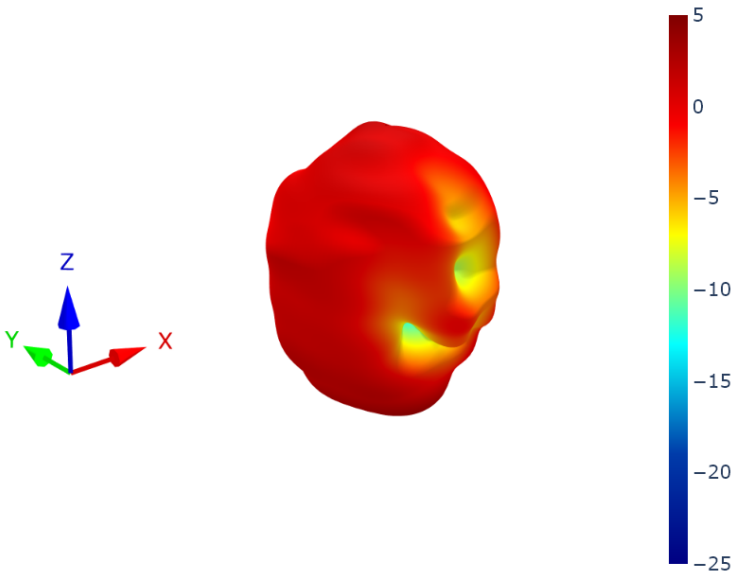
XZ Plane	YZ Plane	XY Plane



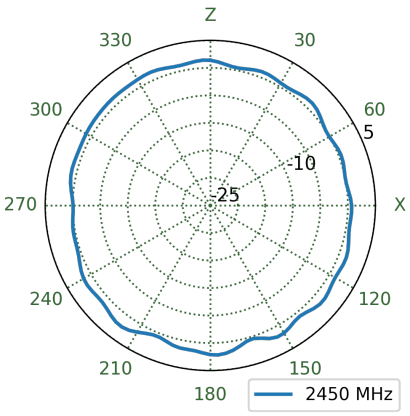


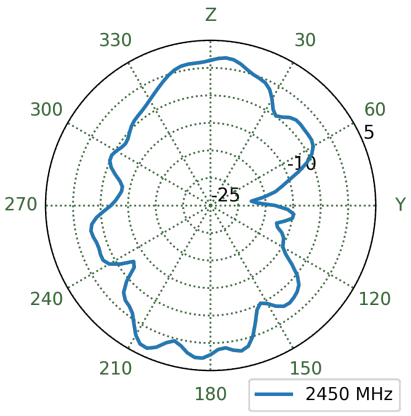


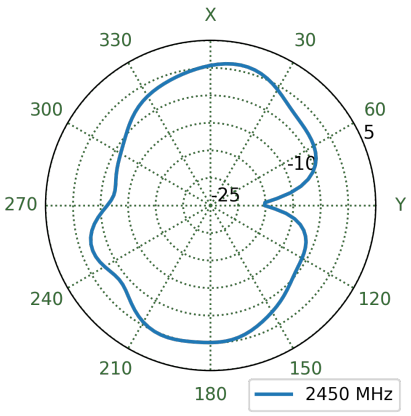
6.11 9x15cm - Bent Patterns at 2450 MHz



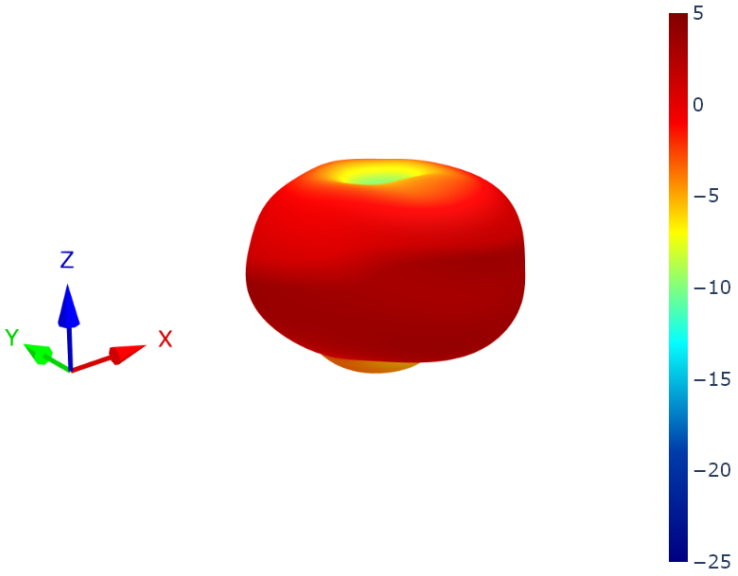
XZ Plane	YZ Plane	XY Plane



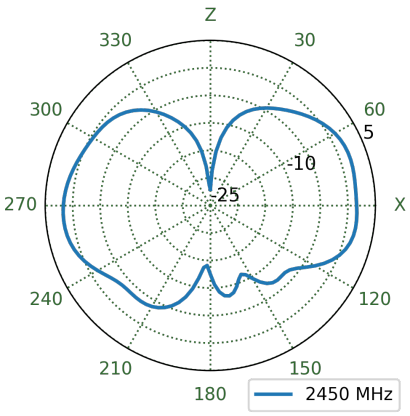


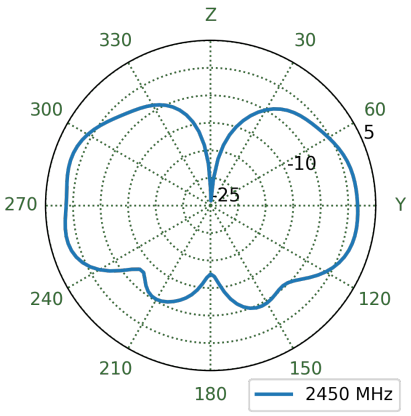


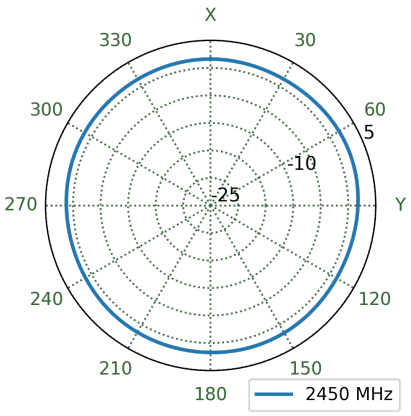
6.12 9x15cm - Straight Patterns at 2450 MHz



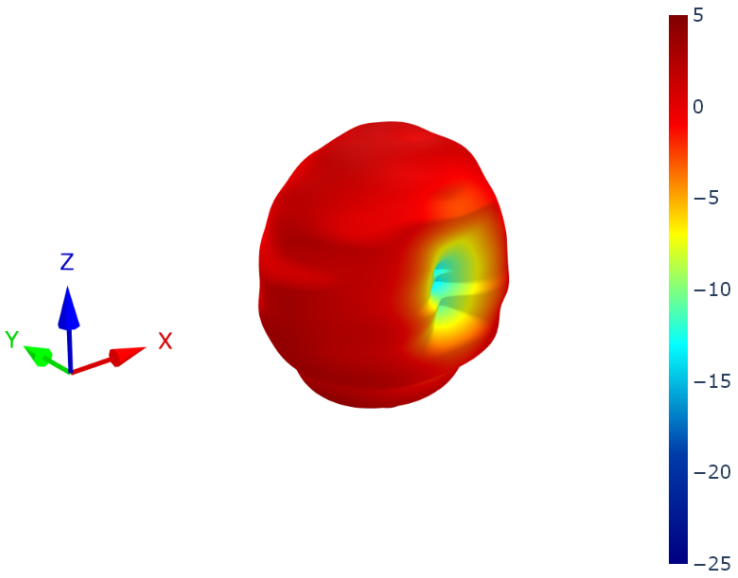
XZ Plane	YZ Plane	XY Plane



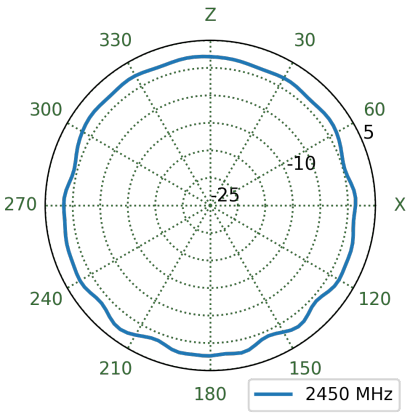


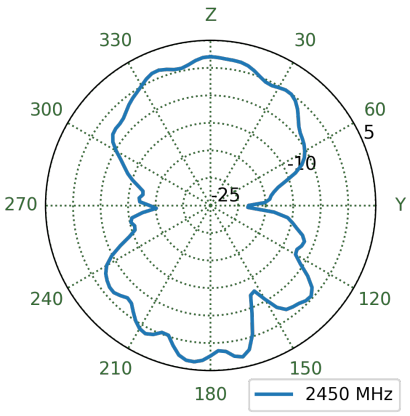


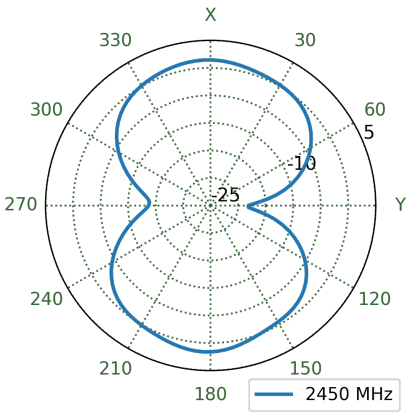
6.13 Free Space - Bent Patterns at 2450 MHz



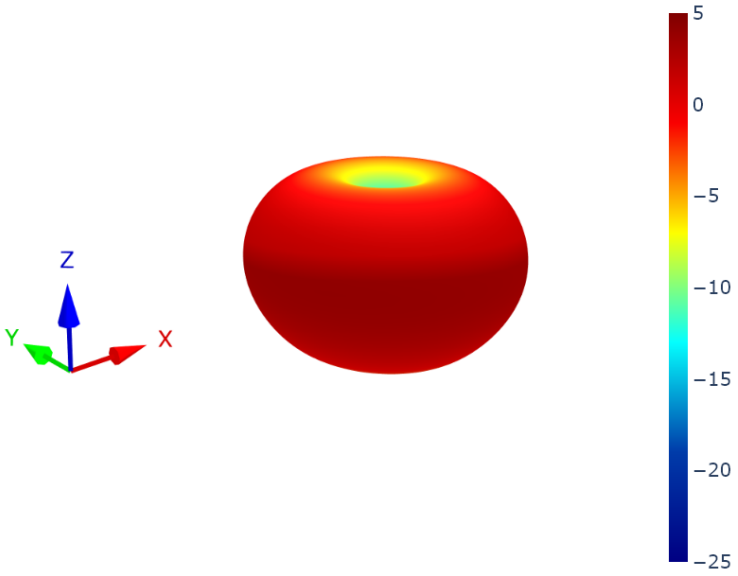
XZ Plane	YZ Plane	XY Plane



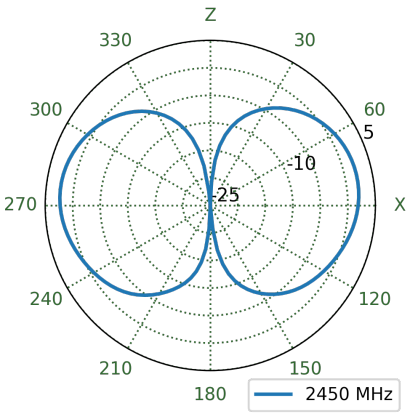


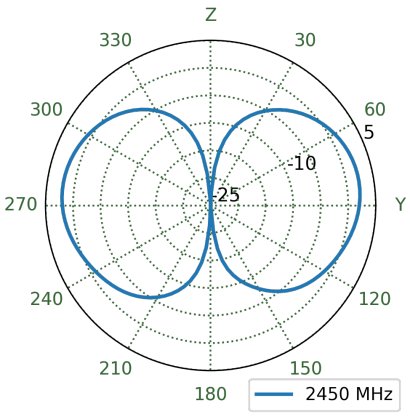


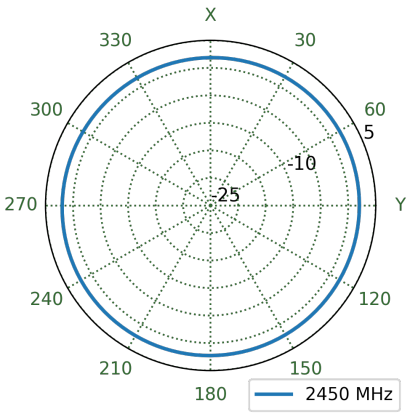
6.14 Free Space - Straight Patterns at 2450 MHz



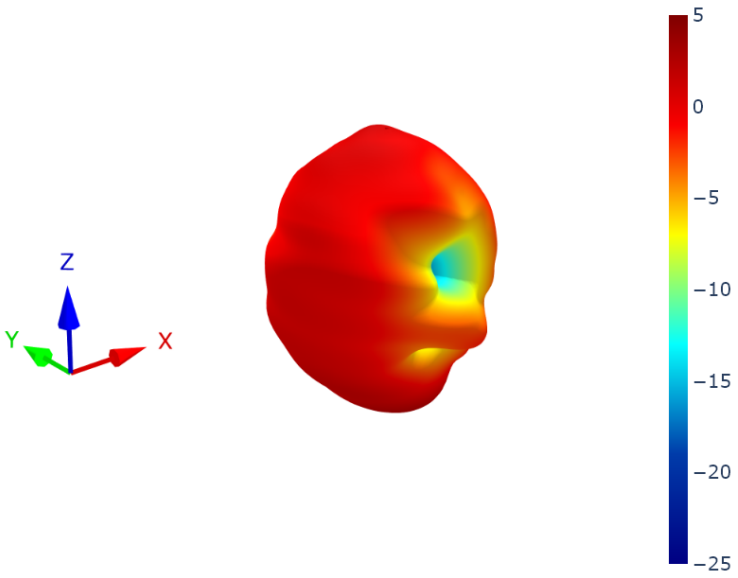
XZ Plane	YZ Plane	XY Plane



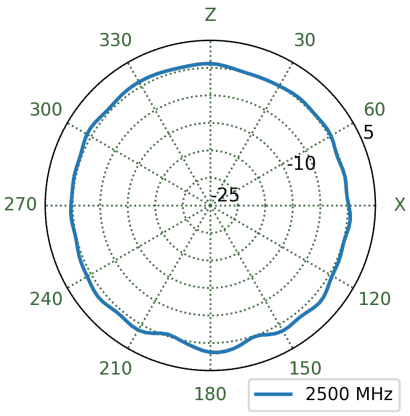


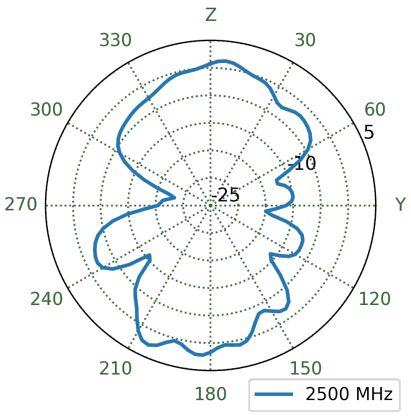


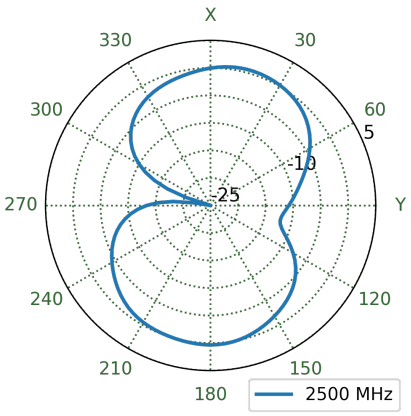
6.15 15x9cm - Bent Patterns at 2500 MHz



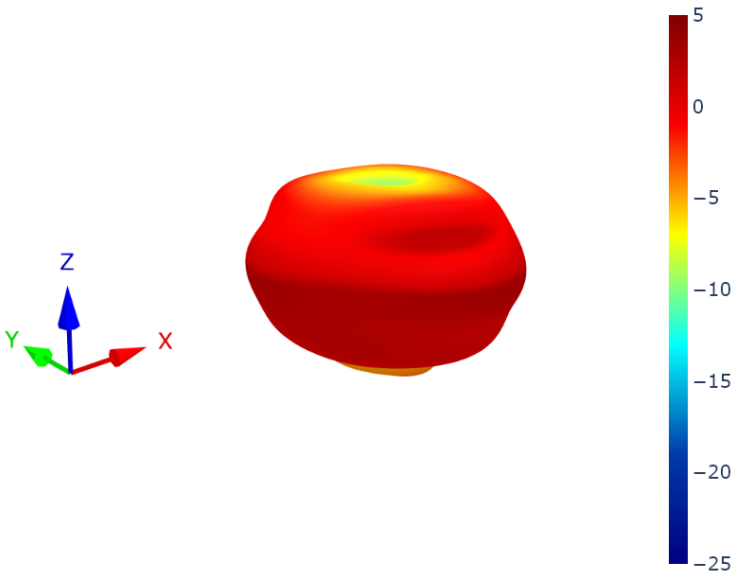
XZ Plane	YZ Plane	XY Plane



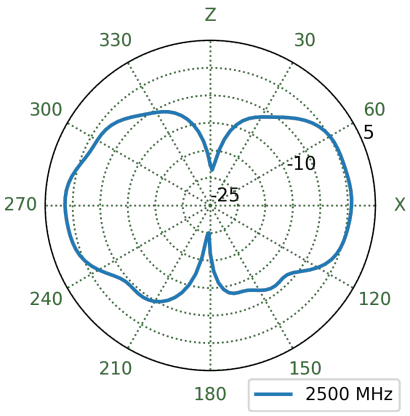


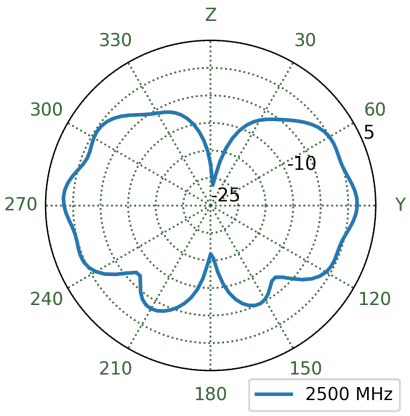


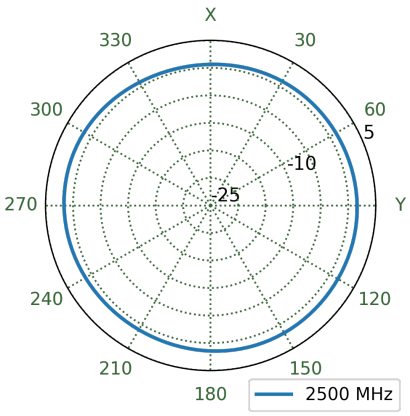
6.16 15x9cm - Straight Patterns at 2500 MHz



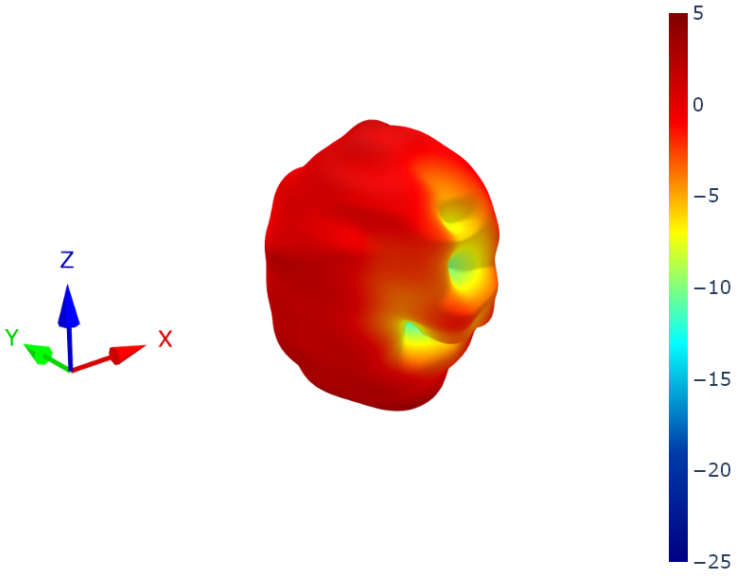
XZ Plane	YZ Plane	XY Plane

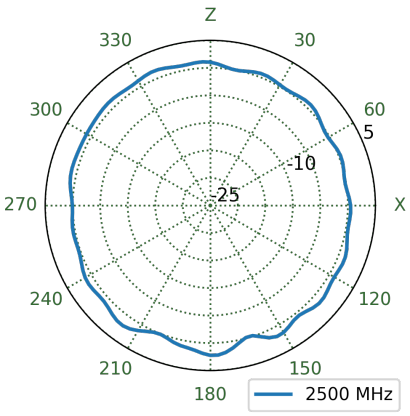
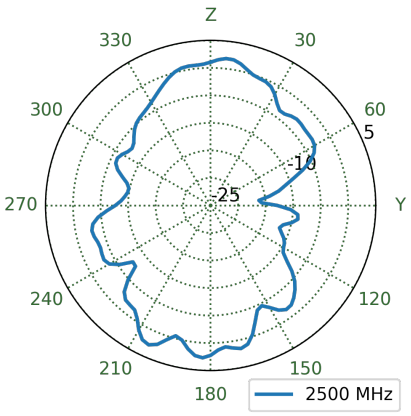
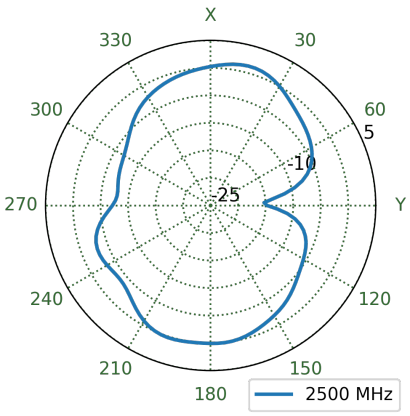




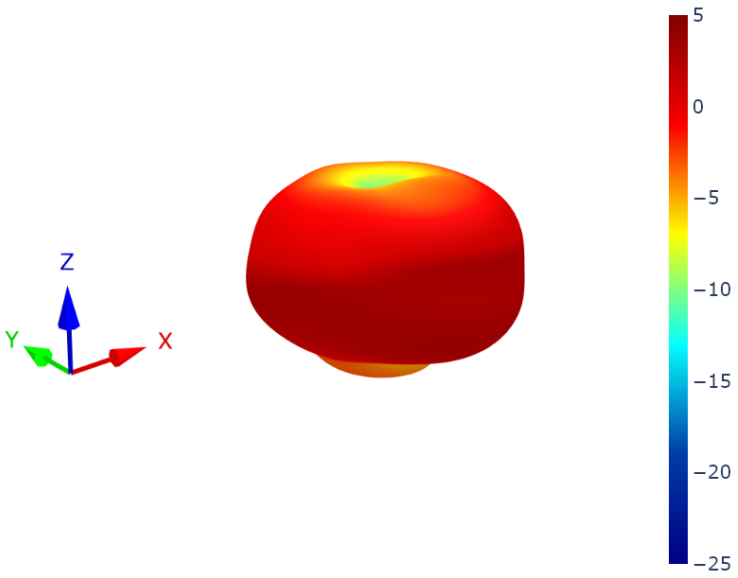


6.17 9x15cm - Bent Patterns at 2500 MHz

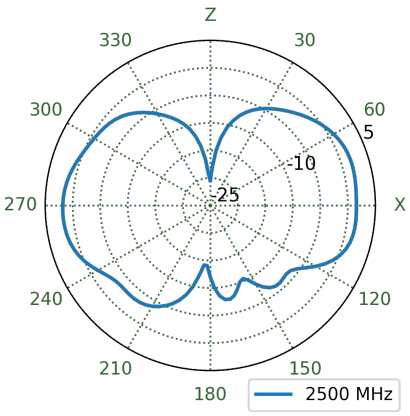


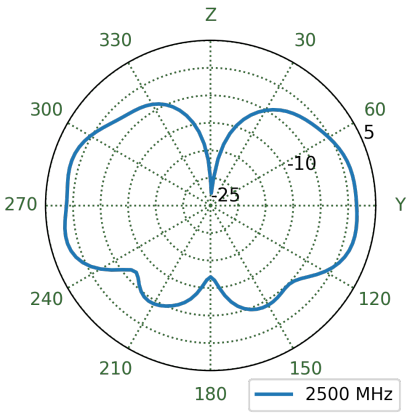
XZ Plane	YZ Plane	XY Plane
		

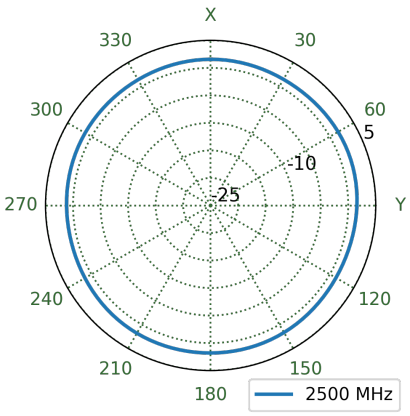
6.18 9x15cm - Straight Patterns at 2500 MHz



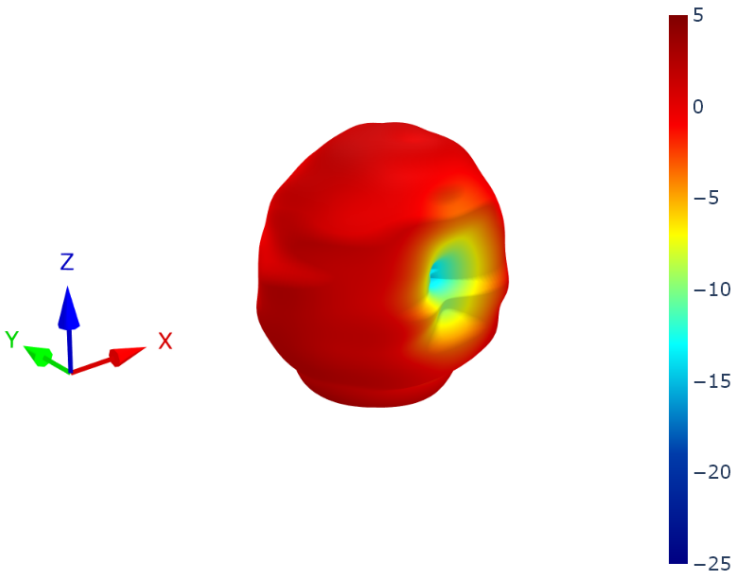
XZ Plane	YZ Plane	XY Plane



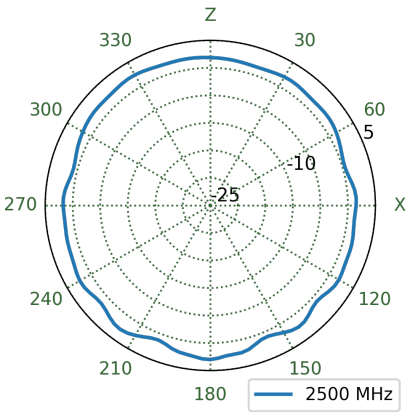


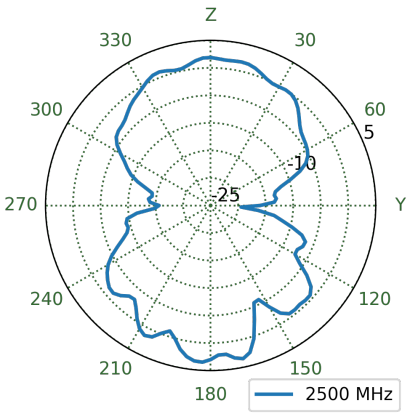


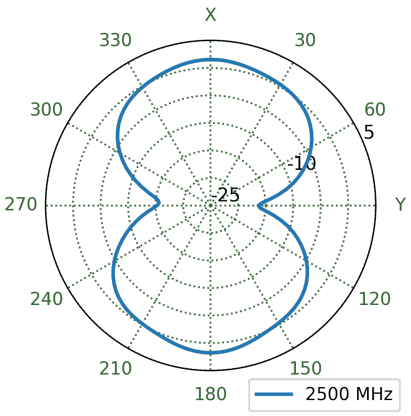
6.19 Free Space - Bent Patterns at 2500 MHz



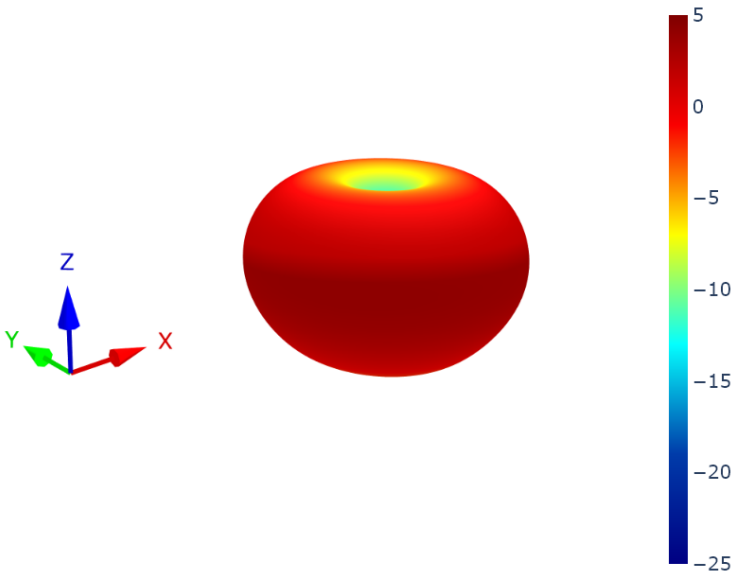
XZ Plane	YZ Plane	XY Plane



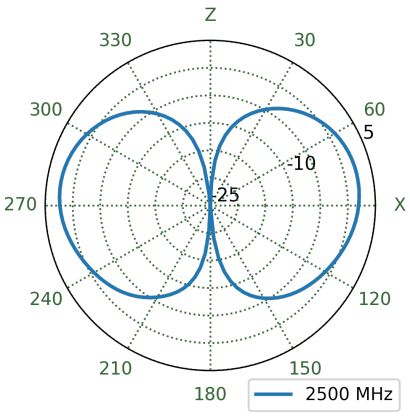


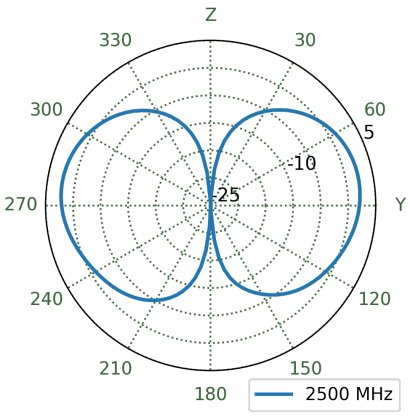


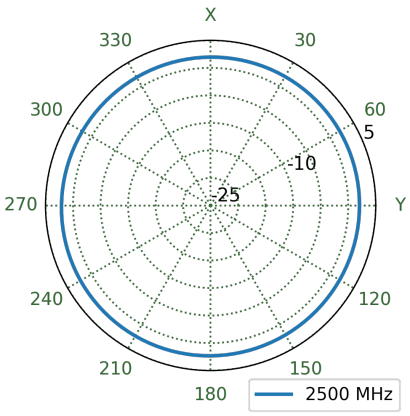
6.20 Free Space - Straight Patterns at 2500 MHz



XZ Plane	YZ Plane	XY Plane







Changelog for the datasheet

SPE-26-8-144– GW.39.A153

Revision: A (Original First Release)	
Date:	2026-07-22
Notes:	Initial Release
Author:	Gary West

Previous Revisions

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